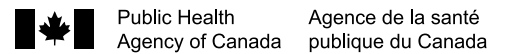




National Blueprint for Injury Prevention in Older Drivers



CAOT - ACE
Canadian Association of
Occupational Therapists



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Preface

The Canadian Association of Occupational Therapists (CAOT) is pleased to announce the launch of the *National Blueprint for Injury Prevention in Older Drivers*. The purpose of the project, funded through a contribution agreement with the Public Health Agency of Canada, was to develop an Older Driver Blueprint that is directed towards preventing injury by promoting safety amongst older drivers.

Who will be interested in the Blueprint?

The *National Blueprint for Injury Prevention in Older Drivers* is aimed at numerous stakeholders who are interested in the safety of Canada's older drivers. The project has an important emphasis on injury prevention and enhanced health and well-being.

How was the Blueprint developed?

CAOT worked with a representative group of stakeholders including older drivers and their families, health care professionals, driving evaluators, and policy-makers. The *Blueprint's* focus is on sustained action with the ultimate aim of promoting safe driving and injury prevention among older drivers.

The *Blueprint* includes a *vision, guiding principles, priority goals, and directions for action.*



Background and Statement of Concern

In 2007-2008 the Public Health Agency of Canada (PHAC), through the Population Health Fund's mandate to foster community capacity for action on or across the determinants of health ¹, collaborated with the Canadian Association of Occupational Therapists (CAOT) and Dr. Nicol Korner-Bitensky of McGill University to develop the *National Blueprint for Injury Prevention in Older Drivers* (herein referred to as the *Older Driver Blueprint*). CAOT is the national non-profit professional organization that represents over 12,000 occupational therapists in Canada. As a professional group, occupational therapists are concerned with promoting health and well-being through occupation ².

Seniors are the fastest growing segment of the driving population and driving is often a key component of independence ³. Current statistics indicate that older driver mortality and morbidity is on the rise, and thus, older driver safety is of great concern ⁴. While it has long been believed that the older driver is actually the safest and most cautious driver on the road, statistical analyses of collision data from the past decade reveals otherwise. The leading cause of accidental deaths for persons 65 to 75 years old in Canada today is driving-related accidents. Those over the age of 75 have a 3.5 times higher crash rate per miles driven compared to 35 to 44 year olds ⁴. Given that by the year 2040 there will be almost double the number of older drivers in Canada, this problem is likely to increase in the coming years if strategic actions are not put in place.

The *Older Driver Blueprint* presented here is targeted at drivers 55 years and older. The term "Blueprint" was selected as it denotes an active strategy requiring collaboration and a common goal. *The Older Driver Blueprint* demonstrates the common features of other blueprints designed for health-related outcomes including:

- a focus on an issue of concern to multiple stakeholders with an action plan for the resolution of the problem, often accompanied by statements of vision, purpose, goals and directions for action;
- consideration of multiple lines of evidence from various sectors and comprehensive stakeholder voices;

- multiple target audiences with communication directed both to internal (i.e. those directly concerned) and external audiences;
- exploration of areas of accountability for involved stakeholders (regarding implementation and or sustainability).

Stakeholders include older adults in Canada and those concerned with older driver safety such as national and local seniors agencies, health care professionals and associated agencies, regional and national jurisdictions, transportation ministries/agencies, insurance and



automobile industries, traffic safety professionals, law enforcement representatives, provincial, territorial and federal health agencies and ministries. This list is not meant to be exhaustive; rather it exemplifies the agencies that have been involved in older driver safety.

The *Older Driver Blueprint* initiative provides a strategy designed to reduce crashes of older drivers. The *Blueprint* is based on a philosophy that older drivers in Canada will be supported in maintaining safe driving practices which will directly contribute to healthy living and well-being, and to injury prevention, reduced mortality and enhanced public safety.

The *Older Driver Blueprint* project is an important and innovative initiative that aims to enhance the capacity of older adults to maintain their fitness to drive for as long as possible and maintain their engagement in the occupations which give meaning and purpose to their lives.

Blueprint Development

The *Older Driver Blueprint* is the result of collaborative efforts by CAOT, Dr. Nicol Korner-Bitensky of McGill University, and a National Advisory Committee of individuals representing stakeholders in older driver safety. Each Advisory Committee member was invited based on their expertise in driving or relevant stakeholder representation. Teleconferences, face-to-face meetings and email discussions were used to bring the team together to develop the *Blueprint*.

The *Older Driver Blueprint* builds upon previous work by CAOT regarding older drivers. In December 2005, the Chief Coroner of Ontario requested that CAOT respond to recommendations emerging from an inquest into the death of a pedestrian hit by a driver who had a progressive neurological disease. Led by Dr. Korner-Bitensky, a national panel created recommendations based on a systematic review of the scientific evidence, provincial legislation on driving, and Canadian jurisprudence related to driving over the last 50 years. The findings were presented to the PHAC in early 2007. Subsequently, the PHAC invited CAOT to submit a proposal to develop a blueprint for injury prevention in older drivers. This proposal received approval and work began in October 2007.

Project activities were focused upon addressing five specific project objectives that culminated in the development of the *Older Driver Blueprint*. The project objectives were:

- to develop and disseminate a *National Blueprint for Injury Prevention in Older Drivers* with the assistance of an Advisory Committee of key stakeholders;
- to conduct systematic reviews to identify the scientific evidence regarding the effectiveness of driving-related injury prevention interventions, the impact of medical conditions on driving safety of older drivers, and effective driving cessation strategies. These reviews will inform various stakeholders using knowledge translation strategies tailored for each group;
- to hold focus groups of older drivers across the nation to identify their perceived need for refresher programs,

variations in need across the country, and the structure and content that would be acceptable to older adults;

- to conduct a national survey to identify existing driver refresher programs across Canada, their content and structure and the facilitators and barriers to providing driver refresher services to older drivers;
- to identify, using survey methodology, capacity building needs of occupational therapists regarding the provision of screening, assessment and intervention services related to older driver safety in Canada.

Each project objective utilized an inter-sectoral, collaborative approach. The project team collaborated with established networks of individuals and organizations interested in older driver safety thereby building on existing knowledge and practices. A national perspective was attained by soliciting input and encouraging participation from four PHAC defined regions across Canada. Regions included both urban and rural populations and English and French speaking Canadians. Best available evidence was used to inform decision-making wherever possible.

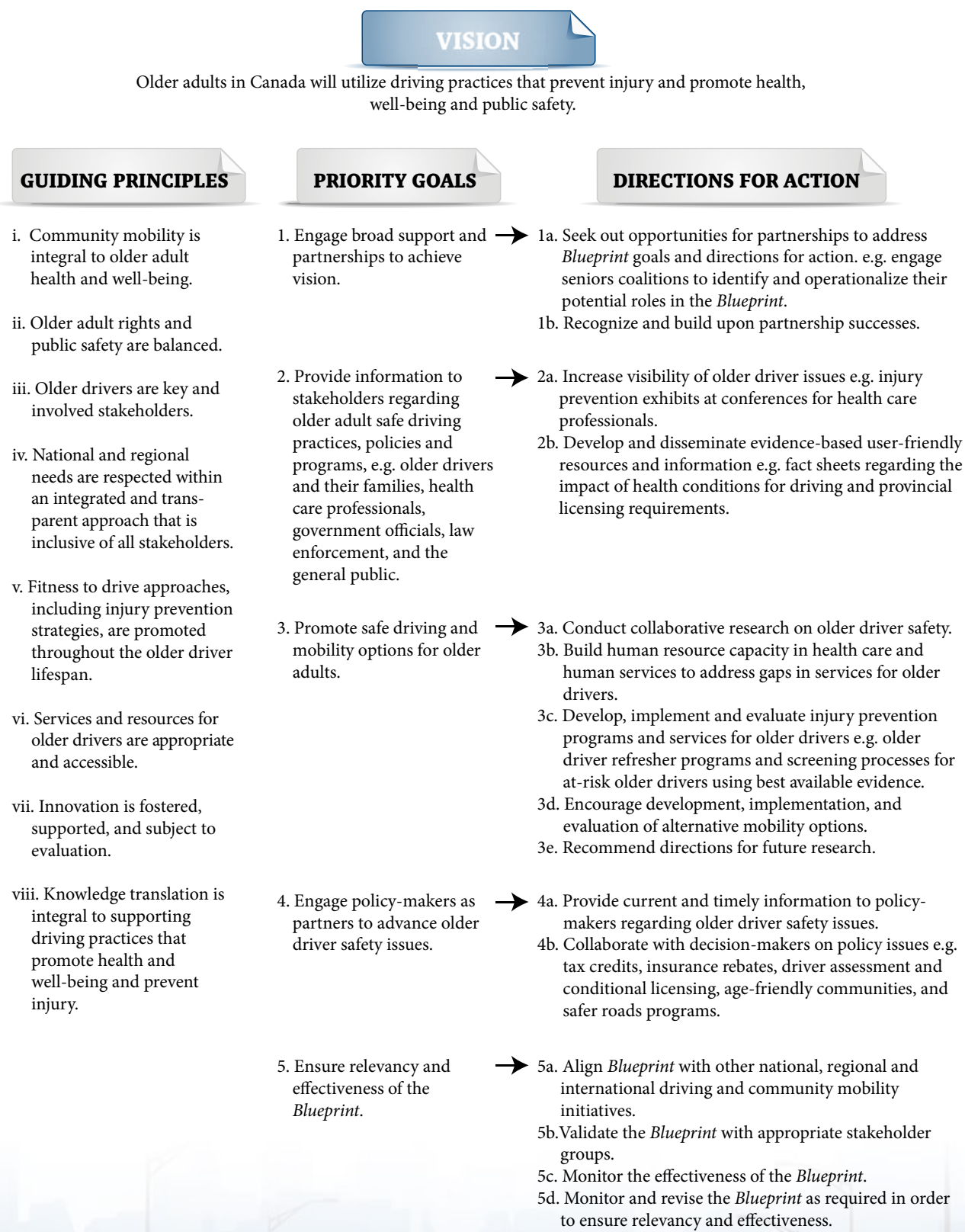
The final version of the *Older Driver Blueprint* was produced based on a shared vision amongst the project team and the Advisory Committee.

Guiding principles were developed so that basic assumptions of the *Blueprint* are communicated to stakeholders in a transparent manner. These *guiding principles* will serve to guide *Blueprint* implementation.

Priority goals are key objectives that will have an immediate impact along with long-term implications.

Directions for action are action items that involve multiple older driver safety stakeholders. These are congruent with the guiding principles and are measurable and achievable. The directions for action require stakeholders to work collaboratively, efficiently and effectively to avoid duplication of efforts and ensure success of the *Blueprint*. The schematic diagram (Figure 1) on the following page outlines critical elements of the *Older Driver Blueprint*.

Figure 1: Older Driver Blueprint: Vision, guiding principles, priority goals and directions for action



Vision

Older adults in Canada will utilize driving practices that prevent injury and promote health, well-being and public safety.

This vision guides the strategic priorities of the *Blueprint*. The vision was initially presented to the Advisory Committee in January 2008 and was reviewed and critiqued by members during a face-to-face meeting in March 2008. Between July and September 2008 the vision was revised and further validated using Advisory Committee member feedback and consultation with other key stakeholders.

While the vision describes the Canadian older adult, international readers will note that the *Blueprint* addresses issues common to many developed countries experiencing similar demographic trends.

The meaning of each component of the vision statement is expanded upon below

Older adults in Canada...

refers to any individual who requires a health promotion approach to safe driving that may include refresher programs, adaptation of the vehicle or the driving environment, and/or support to maintain community mobility when driving cessation is required due to consequences of aging and associated health conditions.

... will utilize driving practices...

denotes both the practices of an individual, as well as the benefits associated with driving in a safe environment. An individual's driving practices include self-assessment of fitness to drive and adaptation of driving practices or the vehicle to address the impact of aging or illness on safe operation of a vehicle. Adaptations may be done in collaboration with others, such as family members, personnel offering driver refresher programs or health care professionals with expertise in driving related issues. Practices can also encompass the driving environment.

For example, age-friendly roads and communities, and automobiles with features designed for the older driver can improve safety. As well, the driving environment can include driving policies designed to support a fitness to drive approach.

... prevent injury ...

Injury prevention is a key concept. The goal is that the older adult will drive with an injury risk ratio per miles driven that is no higher than any other age group in Canada. Ideally, the vision would espouse a reduced risk for older drivers. The term injury encompasses morbidity and mortality resulting from injury due to crashes involving older drivers. Injury prevention also encompasses other road users including passengers and/or pedestrians who may be impacted by a crash involving an older driver. Activities to promote older driver safety and prevent injury include, but are not be limited to, implementing effective screening of at-risk older drivers, the provision of services, and the development of policies related to older driver safety.

... promote health, well-being...

The health and well-being of older adults and the public are potential outcomes of promoting safe driving practices among older adults. Reducing injury and promoting community mobility will result in better physical and mental health outcomes for older drivers. Improved management of driving cessation issues and provision of community mobility options other than driving are important elements that promote health and well-being in older adulthood.

... public safety...

Public safety is a natural consequence of safe driving practices as fewer crashes by older drivers will also benefit the general public. Public calls for action against older drivers often result from accidents involving older drivers. The *Blueprint* supports public safety initiatives, including the development of strategies to improve safety, that focus on vehicle and roadway design.

Guiding Principles

i. Community mobility is integral to older adult health and well-being.

Community mobility is a term encompassing all forms of transportation including driving that allow an individual to attend events, appointments and any activity taking place outside of the home. Inherent in this statement is the recognition that while driving is a privilege, health and well-being can be compromised if community mobility is impeded. Community mobility is considered a right, creating an impetus for action and the development of alternative community mobility options for older adults when driving is not the best alternative.

ii. Older adult rights and public safety are balanced.

A goal of the *Older Driver Blueprint* is to keep older adults driving as long as safely possible. However, driving takes place within a context in which the safety of others must be considered (e.g. passengers, other drivers, pedestrians). The ability to maintain driving privileges must therefore be counter-balanced with the need to develop strategies, laws and policies that address public safety.

iii. Older drivers are key and involved stakeholders.

Keeping the older driver as the central stakeholder is critical to ensuring that strategies developed, such as older driver education courses, driver cessation strategies, and techniques to evaluate fitness to drive, are appropriate and include consideration of the older driver's needs. Older drivers and those who are no longer driving should be included in the development of strategies and recommendations that relate to older driver injury prevention. Older drivers must play a key role in actively informing initiatives such as determining directions in research related to driving and injury prevention and in policy development.

iv. National and regional needs are respected within an integrated and transparent approach that is inclusive of all stakeholders.

The needs of national institutions as well as the distinct requirements of regions must be considered when addressing community mobility. An integrated and transparent approach implies that agencies work in collaboration towards agreed upon goals, with clearly established guidelines for

communication and decision-making mechanisms. This approach also considers the needs of all related stakeholders, and includes collaborative efforts amongst key stakeholders.

v. Fitness to drive approaches including injury prevention strategies, are promoted throughout the older driver lifespan.

A broad approach to older driver injury prevention addresses fitness to drive related to the cognitive, perceptual and physical skills required for safe operation of a vehicle. This approach also includes awareness of injury prevention strategies to allow older adults to drive safely for as long as possible. The term fitness has a positive association with health and well-being. The term driver lifespan encompasses the time period in which one is a licensed driver, and also the period during which issues related to driving restrictions and preparing for retirement from driving are considered.

vi. Services and resources for older drivers are appropriate and accessible.

All stakeholders are called upon to ensure that services and resources designed for older driver injury prevention are adequate in scope and content for the targeted population. Financial, physical, language and literacy issues require consideration to ensure these services and resources are accessible.

vii. Innovation is fostered, supported, and subject to evaluation.

Innovative activities that promote older driver safety are encouraged, but must be based upon the best available evidence. These activities, including research and products, must include an evaluative component to ensure that desired goals are effectively attained and best practices are encouraged.

viii. Knowledge translation is integral to supporting driving practices that promote health and well-being and prevent injury.

The knowledge/information/evidence related to driving practices that support health and well-being and prevent injury are produced with target audiences and dissemination strategies in mind. Knowledge, such as evidence for injury prevention strategies, innovations, activities and policies are developed in concert with appropriate communication strategies that have adequate resources and funding.

Priority Goals

1. Engage broad support and partnerships to achieve vision.

Other strategies and frameworks exist that support older driver injury prevention. Canadian (national and regional) and international initiatives must be reviewed to determine collaborative approaches that support research and dissemination activities associated with the *Older Driver Blueprint*. Endorsement of the *Blueprint* can be garnered from a variety of stakeholders and may involve a range of activities and initiatives, from brief indirect support to full collaborative partnerships.



2. Provide information to stakeholders regarding older adult safe driving practices, policies and programs.

The target audience for information is all stakeholders involved with older driver injury prevention. In particular, drivers, their families, and health care professionals will benefit from this information. This goal entails the production, dissemination and evaluation cycle of information. The priority areas for development are driving practices, policies and programs. Driving practices encompass a fitness to drive approach for older drivers. Policies are the standards, directives and procedures that are put into place by national and regional government agencies that impact older drivers. Program information refers to evidence-based initiatives and activities designed with injury prevention of older drivers as a goal. This approach can range from organizing information sessions at

small seniors outreach centers, to national marketing campaigns aimed at increasing the awareness of older driver safety issues.

3. Promote safe driving and mobility options for older adults.

This priority goal supports fitness to drive initiatives and the development and support of alternative mobility options for older adults. Promoting safe driving activities is a broad goal and may include local initiatives such as evidence-based driver refresher programs or increasing transportation options. Larger scale initiatives can promote vehicle design and traffic safety, implementation of standard older driver safety screening measures, and marketing strategies that target health care professionals to increase the importance of addressing older driver safety issues. Promoting mobility options and preparation for driving retirement requires consideration of the diverse needs of older adults in both urban and rural areas.

4. Engage policy-makers as partners to advance older driver safety issues.

Policy development can occur on many levels, including regional and national level governance. Advancement of policy can include strategies to disseminate and evaluate its implementation. Policy should be informed by current best evidence when possible and involve the older driver, family, health care professionals, road safety experts, law enforcement and government.

5. Ensure relevancy and effectiveness of the Blueprint.

Advancement and sustainability of the vision articulated for older drivers in this initiative require periodic assessment to ensure that the *Older Driver Blueprint* remains current and relevant. The assessment should be enacted by multiple stakeholders, including those involved in the *Older Driver Blueprint* development. Given the changing context of driving in Canada, it is recommended that the *Blueprint's* relevancy is evaluated on a three year cycle, at minimum.

Directions for Action

Each Priority Goal leads to several action items. The input of the Advisory Committee and the project research findings informed the development of the Directions for Action as outlined below in order of priority for each goal:

1. Engage broad support and partnerships to achieve vision.

- 1a. Seek out opportunities for partnerships to address *Blueprint* goals and directions for action e.g. engage seniors' coalitions to identify and operationalize potential roles in the *Blueprint*.
- 1b. Recognize and build upon partnership successes.

2. Provide information to stakeholders regarding older adult safe driving practices, policies and programs, e.g. older drivers and their families, health care professionals, government officials, law enforcement, and the general public.

- 2a. Increase visibility of older driver issues e.g. injury prevention exhibits at conferences for health care professionals.
- 2b. Develop and disseminate evidence-based user-friendly resources and information e.g. fact sheets regarding the impact of health conditions for driving and provincial licensing requirements.

3. Promote safe driving and mobility options for older adults.

- 3a. Conduct collaborative research on older driver safety.
- 3b. Build human resource capacity in health and human services to address gaps in services for older drivers.
- 3c. Develop, implement, and evaluate injury prevention programs and services for older drivers using best available evidence e.g. older driver refresher programs and screening processes for at-risk older drivers.
- 3d. Encourage development, implementation, and evaluation of alternative mobility options.
- 3e. Recommend directions for future research.

4. Engage policy-makers as partners to advance older driver safety issues.

- 4a. Provide current and timely information to policy-makers regarding older driver safety issues.
- 4b. Collaborate with decision makers on policy issues e.g. tax credits, insurance rebates, driver assessment and conditional licensing, age-friendly communities, and safer roads programs.

5. Ensure relevancy and effectiveness of the *Blueprint*.

- 5a. Align the *Blueprint* with other national, regional and international driving and community mobility initiatives.
- 5b. Validate the *Blueprint* with appropriate stakeholder groups.
- 5c. Monitor the effectiveness of the *Blueprint*.
- 5d. Monitor and revise the *Blueprint* as required in order to ensure relevancy and effectiveness.

Closing Statement

The objective was to create an *Older Driver Blueprint* that is directed towards preventing injury by promoting safety amongst older drivers. The intent is that this document will be used by many stakeholders and will inform future policy, practice, education and research regarding older driver safety. Readers are welcome to disseminate and use this document broadly with proper acknowledgment of CAOT. The document can be retrieved in French and English at www.caot.ca/driving and www.mcgill.ca/spot/ot/driving.

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References

1. Public Health Agency of Canada. (2007). *Population health fund*. Retrieved November 24, 2008 from <http://www.phac-aspc.gc.ca/ph-sp/fund-fonds/index-eng.php>.
2. Canadian Association of Occupational Therapists. (2003). *Position Statement on Everyday Occupations and Health*. Retrieved on November 20, 2008 from <http://www.caot.ca/default.asp?pageid=699>.
3. Ragland, D.R., Satariano, W.A., & MacLeod, K.E. (2004). Reasons given by older people for limitations or avoidance of driving. *The Gerontologist*, 44, 237-244.
4. Canada Safety Council. (2008). *Mature drivers must keep skills sharp*. Retrieved November 20, 2008 from <http://www.safety-council.org/news/media/releases/2008/nsensw-08.html>.